REMARKS

Claims 1-19 are currently pending in the application. Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

35 U.S.C. § 103 Rejection

Claims 1-19 (incorrectly indicated as claims 1-14) are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0054572 issued to OLDALE et al. ("OLDALE"). Applicants respectfully traverse this rejection for at least the following reasons.

As a preliminary matter, Applicants submit that this rejection is overcome at least because Applicants have already filed a certified English language translation of the priority document upon which the instant application claims priority under 35 U.S.C. § 119. Applicants note that the application as filed contained a cover sheet explaining the following: The attached documents are exact copies of the European patent application described on the following page, as originally filed. Thus, the original filed application represents a certified English language translation of the priority document. As such, Applicants are entitled to an effective filing date of May 10, 2001 (the filing date of the priority document). OLDALE, on the other hand, has an effective filing date of July 27, 2001. Since May 10, 2001 antedates July 27, 2001, OLDALE is not prior art under 35 U.S.C. § 102(e) and therefore unavailable for a rejection under 35 U.S.C. § 103.

Furthermore, Applicants also traverse the instant rejection as being improper and unsupported by any prior disclosure.

Independent claim 1 recites, in pertinent part:

computing a plurality of similarity factors based on:
    at least one advisee profile from at least one newly rated item and
determining which at least one user has already rated the item, wherein
the advisee profile for a recommendation system comprises a plurality of
records, each record including a user identifier, an item identifier, and a
rating value, such that each record is linked in a first and a second
dimension; and
generating a recommendation of at least one item of the selected item
list, according to the previously provided ratings of the at least one item
by the neighboring users.

Independent claim 7 recites, in pertinent part:

    each record including a user identifier, an item identifier, and a
rating value, wherein each record is linked in a first and a second
dimension, the first dimension linking records with a same user identifier
in a sequence according to the item identifier, and the second dimension
linking records with a same item identifier in a sequence according to the
user identifier.

Independent claim 8 recites, in pertinent part:

    receiving a recommendation request comprising a selected item list
from the advisee for the recommendation by a recommendation system;
    in response to the recommendation request, computing a plurality
of similarity factors based on at least one advisee profile from at least one
newly rated item and determining which at least one user has already
rated the item, and
    generating a recommendation of at least one item from the selected item
list based on ratings provided by each neighboring user.

Independent claim 1

In rejecting independent claim 1, the Examiner points to paragraph [0342] of

OLDALE as disclosing "receiving a recommendation request comprising a selected item

list from an advisee for a recommendation by a recommendation system". Applicants

disagree. Paragraph [0342] of OLDALE merely states the following;

[0342] When estimating the profile of the user requesting a recommendation we
can, in effect, treat profiles as containing just the last two attributes, and use the
likelihood function for ratings in place of the more complex likelihood function for

histories.

There is no language in the noted passage disclosing <u>receiving a</u>

<u>recommendation request comprising a selected item list</u> from an advisee for a

recommendation by a recommendation system. Nor has the Examiner shown how the

noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to paragraph [0069] of OLDALE as disclosing "in

response to the recommendation request, computing a plurality of similarity factors

based on: at least one advisee profile from at least one newly rated item and

determining which at least one user has already rated the item, wherein the advisee

profile comprises a plurality of records, each record including a user identifier, an item

identifier, and a rating value, such that each record is linked in a first and a second

dimension". Applicants disagree. Paragraph [0069] of OLDALE merely states the

following;

> [0069] In one embodiment of the invention, the item profiles obtained by the
> method of the invention could be stored such that subsequently a particular item
> could be specified and items which were similar to that particular item would then
> be recommended. The specified item could be compared to other items for
> which item profiles were available using for example a similarity metric based on
> the item profiles. A recommendation of other items which were similar to the
> specified item could then be made to the user.

There is no language in the noted passage disclosing in response to the

recommendation request, computing a plurality of similarity factors based on: at least

one advisee profile from <u>at least one newly rated item and determining which at least</u>

<u>one user has already rated the item</u>, wherein the advisee profile comprises a plurality of

records, each record including a user identifier, an item identifier, and a rating value,

such that <u>each record is linked in a first and a second dimension</u>. Nor has the

Examiner shown how the noted language can be read or interpreted to disclose the

recited feature.

The Examiner additionally points to paragraph [0082] of OLDALE as disclosing

"selecting, from the plurality of users of the recommendation system, neighboring users

to the advisee, according to the similarity factors". Applicants disagree. Paragraph

[0082] of OLDALE merely states the following;

> [0082] Preferably therefore, users are given the opportunity of giving additional details about their preferences over and above rating the items about which they are asked. Thus, the users can provide more information about their preferences than is currently usable in the prediction of the suitability of an item for a user or can be displayed in the system at the time at which they input the data. Thus, for example, a user might be asked whether or not she had been to each of four locations and she would answer yes or no for each of these. If the user wished to do so however, she could add additional information either in the form of, say, other locations which she had visited (resulting in a horizontal broadening of the data set) or she could, for example, specify the attractions which she had visited at each of the four locations (resulting in a vertical deepening of the data set). Thus, in vertical deepening of the data set, the user will provide data relating to one or more attributes (e.g. the attractions at a particular location) of one or more of the items for which data is obtained.

Applicants fail to recognize any language in the noted passage disclosing

selecting, from the plurality of users of the recommendation system, <u>neighboring users</u>

<u>to the advisee, according to the similarity factors</u>. Nor has the Examiner shown how the

noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to paragraphs [0082] and [0105] of OLDALE as

disclosing "generating a recommendation of at least one item of the selected item list,

according to the previously provided ratings of the at least one item by the neighboring

users". Applicants disagree. Paragraphs [0082] and [0105] of OLDALE merely states

the following;

> [0082] Preferably therefore, users are given the opportunity of giving additional

details about their preferences over and above rating the items about which they are asked. Thus, the users can provide more information about their preferences than is currently usable in the prediction of the suitability of an item for a user or can be displayed as output in the system at the time at which they input the data. Thus, for example, a user might be asked whether or not she had been to each of four locations and she would answer yes or no for each of these. If the user wished to do so however, she could add additional information either in the form of, say, other locations which she had visited (resulting in a horizontal broadening of the data set) or she could, for example, specify the attractions which she had visited at each of the four locations (resulting in a vertical deepening of the data set). Thus, in vertical deepening of the data set, the user will provide data relating to one or more attributes (e.g. the attractions at a particular location) of one or more of the items for which data is obtained.

[0105] In an alternative preferred embodiment, the manager of the database could generate a fixed number of phantom cases. The profile of an item for which insufficient data was available would be specified by the manager to be a weighted average of some other items and the phantom cases would be specified to rate that item with ratings which depending on the manually determined profile. Whenever a new actual case was added to the database, a phantom case could be removed. Thus, over time, the updated case profile would increasingly reflect the observations for actual cases.

Applicants fail to recognize any language in the noted passages disclosing generating a recommendation of at least one item of the selected item list, <u>according to the previously provided ratings of the at least one item by the neighboring users</u>. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

Finally, on page 3 of the Office Action, the Examiner acknowledges that "Oldale does not utilize identical terminology with respect to the instant case", but explains that "it would have been obvious to one of ordinary skill in the art to adapt the invention in Oldale for the uses in the instant invention in order to facilitate sales". Completely absent from this conclusion, however, is any explanation of the differences between the so-called non-identical terminology. Nor has the Examiner identified any prior art basis for modifying ODALE "to facilitate sales."

Applicants submit that the Examiner has provided only conclusions of obviousness and neglects to set forth any prior art basis for combining the teachings of the applied documents. In establishing a *prima facie* case of obviousness under 35 U.S.C. § 103, it is incumbent upon the Examiner to provide a reason *why* one of ordinary skill in the art would have found it obvious to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. *See Ex parte Clapp*, 227 USPQ 972 (B.P.A.I. 1985) To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Appellant's disclosure. See, for example, *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). As noted above, the applied document is silent with regard to a number of recited features and relates to a information system which functions in a different manner. Moreover, OLDALE does not teaches or suggests modifying the structure or operation of OLDALE in the manner asserted by the Examiner.

Because the art of record fails to provide any reasonable explanation why one ordinarily skilled in the art would utilize such an arrangement, and/or fails to disclose or suggest the problems that such an arrangement would address, Applicants submit that the art of record fails to provide the requisite motivation or rationale as to *why* one ordinarily skilled in the art would modify OLDALE to include features of the invention in the manner asserted by the Examiner. That is, Applicants submit that because the Examiner has not set forth any basis or reason found in the art of record for modifying OLDALE, the instant rejection has no basis in the art of record, such that the rejection is improper and should be

withdrawn.

Rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

> [t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

Applicants submit that the only reason to modify the teachings of the applied reference in the manner proposed by the Examiner is the result of a review of Applicants' disclosure and the application of impermissible hindsight.

Independent claim 7

In rejecting independent claim 7, the Examiner points to paragraph [0463] of OLDALE as disclosing "a user profile for a recommendation system, comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier". Applicants disagree. Paragraph [0463], as well as paragraphs [0464] – [0470] of OLDALE merely states the following;

[0463] Identify a data set of observations that can be used to predict the suitability of the items. Data can be gathered from a number of sources including:
[0464] from a website
[0465] by questionnaire or survey
[0466] by phone
[0467] from bank records, store card records or other sources of transaction history
[0468] customer service records
[0469] loyalty card records
[0470] obtained from third party sources

There is no language in the noted passage disclosing a user profile for a recommendation system, comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein <u>each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier</u>. Nor has the Examiner shown how the noted language can be read or interpreted to disclose or suggest the recited feature.

Independent claim 8

In rejecting independent claim 8, the Examiner again points to paragraph [0342] of OLDALE as disclosing "receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system". Applicants disagree. As noted above, paragraph [0342] of OLDALE merely states the following;

[0342] When estimating the profile of the user requesting a recommendation we can, in effect, treat profiles as containing just the last two attributes, and use the likelihood function for ratings in place of the more complex likelihood function for histories.

There is no language in the noted passage disclosing <u>receiving a</u>

recommendation request comprising a selected item list from an advisee for a

recommendation by a recommendation system. Nor has the Examiner shown how the

noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to paragraph [0069] of OLDALE as disclosing "in

response to the recommendation request, computing a plurality of similarity factors

based on at least one advisee profile from at least one newly rated item and

determining which at least one user has already rated the item". Applicants disagree.

Paragraph [0069] of OLDALE merely states the following;

> [0069] In one embodiment of the invention, the item profiles obtained by the
> method of the invention could be stored such that subsequently a particular item
> could be specified and items which were similar to that particular item would then
> be recommended. The specified item could be compared to other items for
> which item profiles were available using for example a similarity metric based on
> the item profiles. A recommendation of other items which were similar to the
> specified item could then be made to the user.

There is no language in the noted passage disclosing in response to the

recommendation request, computing a plurality of similarity factors based on: at least

one advisee profile from at least one newly rated item and determining which at least

one user has already rated the item. Nor has the Examiner shown how the noted

language can be read or interpreted to disclose the recited feature.

The Examiner additionally points to paragraph [0004] of OLDALE as disclosing

"selecting neighboring users from the first set of users based on similarities between the

advisee and each member of the first set of users". Applicants disagree. Paragraph

[0004] of OLDALE merely states the following;

> [0004] One known filtering method, memory based reasoning (MBR), correlates
> the preferences of users in the data set for various items with preferences
> provided by the user for some of the items in the data set. The system then

recommends to the user other items that similar users in the data set liked. However, this method can be slow if all other users in the data set are used to make a recommendation, involves losing information if only a subset is used, and is subject to known sources of inaccuracy such as how to weight the preferences of each of a set of very similar users since the informational content of each is low. Consequently, the method is disadvantageous (and may not be practical) in situations where there is a large data set, i.e. a large number of users recommending a large number of items. The method is also disadvantageous in that an operator cannot see how the recommendations made correspond to the dataset. This is a particular problem in certain marketing situations where transparency of the recommendations made is required.

Applicants fail to recognize any language in the noted passage disclosing

selecting neighboring users from the first set of users based on similarities between the

advisee and each member of the first set of users. Nor has the Examiner shown how

the noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to paragraphs [0082] and [0105] of OLDALE as

disclosing "generating a recommendation of at least one item from the selected item list

based on ratings provided by each neighboring user". Applicants disagree.

Paragraphs [0082] and [0105] of OLDALE merely states the following;

[0082] Preferably therefore, users are given the opportunity of giving additional details about their preferences over and above rating the items about which they are asked. Thus, the users can provide more information about their preferences than is currently usable in the prediction of the suitability of an item for a user or can be displayed as output in the system at the time at which they input the data. Thus, for example, a user might be asked whether or not she had been to each of four locations and she would answer yes or no for each of these. If the user wished to do so however, she could add additional information either in the form of, say, other locations which she had visited (resulting in a horizontal broadening of the data set) or she could, for example, specify the attractions which she had visited at each of the four locations (resulting in a vertical deepening of the data set). Thus, in vertical deepening of the data set, the user will provide data relating to one or more attributes (e.g. the attractions at a particular location) of one or more of the items for which data is obtained.

[0105] In an alternative preferred embodiment, the manager of the database could generate a fixed number of phantom cases. The profile of an item for which insufficient data was available would be specified by the manager to be a

weighted average of some other items and the phantom cases would be specified to rate that item with ratings which depending on the manually determined profile. Whenever a new actual case was added to the database, a phantom case could be removed. Thus, over time, the updated case profile would increasingly reflect the observations for actual cases.

Applicants fail to recognize any language in the noted passages disclosing generating a recommendation of at least one item from the selected item list based on ratings provided by each neighboring user. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

Finally, on page 8 of the Office Action, the Examiner requests that Applicants fully consider the disclosure of the applied document even though only certain portions of the prior art document have been cited by the Examiner in rejecting the recited claim features. Applicants remind the Examiner that it is the Examiner who bears the initial burden in establishing the basis of a prior art rejection. Applicants are not required to read the entire disclosure of a prior art document in order to find features which might disclose or suggest each and every recited feature of the claims. The Examiner cannot properly shift the burden of setting forth a *prima face* case of anticipation to Applicants.
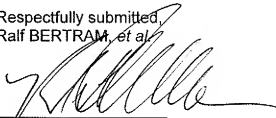
Because OLDALE is not prior art against the instant application and because claims 1, 7 and 8 each recite at least one element not disclosed, or even suggested, by OLDALE, Applicants submit that the instant rejection of claims 1-19 should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for

allowance. The Examiner is respectfully requested to pass the above application to

issue. The Examiner is invited to contact the undersigned at the telephone number

listed below, if needed. Applicants hereby make a written conditional petition for

extension of time, if required. Please charge any deficiencies in fees and credit any

overpayment of fees to Deposit Account No.09-0457.

Respectfully submitted,
Ralf BERTRAM, et al.

Andrew M. Calderon
Registration No. 38,093

Robert W. Mueller
Reg. No. 35,043

Greenblum & Bernstein, P.L.C.
1950 Roland Clarke Place
Reston, Virginia 20191
Telephone: 703-716-1191
Facsimile: 703-716-1180